# This Isn't the Type of Ordnance I Had in Mind

By Ltjg. Ray Barnes

It was our first full fly day since departing the Persian Gulf after supporting Operation Southern Watch. We hadn't seen clouds in weeks, and the temperature finally had dropped into the 80s. I was looking forward to a 4 v X self-escort strike and a day trap. What could go wrong?

The Case II launch proceeded normally, and I climbed to 10,000 feet to get the 2,000 pounds of gas to put me back on ladder. Because of the lower temperature, my Hornet was much more responsive than it had been in the Gulf.

The good visibility let me see the USS *Carl Vinson* battle group to the east—our relief in the 5th Fleet AOR. I found the S-3 tanker off the nose and began my rendezvous. Everything was going well until Betty broke the silence with, "Bleed air left. Bleed air left," followed by the same for the right. I brought my scan inside, and sure enough, both bleed-air-warning lights were illuminated. I had excess knots, so I brought both throttles to idle, pulled the green apple for emergency oxygen, and secured the bleeds and the OBOGS. With the immediate-action items completed, I told lead of my situation, and I coordinated with tower to recover as soon as possible.

There were no secondary indications of fire, and the engine display showed no abnormal readings. After double-checking the procedures in my PCL, I passed aft of the ship and began an easy descent for a recovery, flying under marshal's control.

Since I had been airborne for all of five minutes and had a lot of fuel to get rid of, I turned on

the dumps and thought about my situation. The lack of OBOGS and throttle boost immediately were obvious, and I realized ECS cooling and external-fuel transfer also would be affected. I began speaking with a squadron rep on the ship (who turned out to be the only guy in the squadron with less flight time than me), and after covering all of the steps again, we agreed a straight-in on this recovery was in order. I descended to angels 1.2 and hooked in at 10 miles.

I pulled up the fuel display to see how the fuel dump was going and saw I had 1,300 pounds of fuel trapped in the centerline-external tank and 1,400 pounds in the right-external tank. Since we can't trap with the centerline tank over one-quarter full, I told my rep I would have to jettison the tank or divert. Unfortunately, we were in the Indian Ocean conducting blue-water ops. The nearest divert was 350 miles away in Oman—not a practical alternative.

After the rep considered how it would look if Rockets 14 and 15 (of 15) decided to pickle-off a fuel tank, he notified the XO, who got CAG approval. We double-checked all the jettison settings, but nothing happened when I pushed the red button. The station was selected, stores were selected with the select-jett knob, and master arm was on; but SIM, that nemesis of strike-fighter pilots everywhere, still was boxed. After deselecting SIM, the fuel tank came off without a problem, and I continued the approach. My usable fuel at max trap would be close to tank state, so I requested a tanker hawk as well.

Standard-operating procedure for the last-day recovery was to set the base-recovery course directly into the sun, and the ship did not disappoint me. I began to break out the ship at two miles and continued down with good bull's-eye. I told paddles my approach would be without throttle boost, and, as I hit the start, I was clara lineup, as well. The low sun washed out the landing area. Paddles kept me on centerline, and I dropped the jet in for the OK 2-wire, ending my "good-deal" day flight.

What did I learn from this experience? Dealing with an emergency involves more than just immediate-action items. By securing the bleed air with no divert and 2,700 pounds trapped in the external tanks, we had some decisions to make. What configurations are recoverable? When is tank jettison necessary? What will the usable fuel state be on the ball at max trap? If a real leak in the bleed-air system is the culprit, time is critical because the hot air could cause a fire.

Postflight inspection showed a weld on the bleed-air ducting had cracked and had begun to burn the insulation surrounding it before the primary, bleed-air-shutoff valves closed. Had we earlier recognized the need to jettison a fuel tank, we also would have delayed the fuel dumping to give us more time.

I also learned that a thorough understanding of aircraft systems pays big dividends when thinking through the consequences of an emergency. Bleed air in an FA-18 is used in many other systems we tend to take for granted. Last, with good communication, even the two most junior guys in a squadron have enough knowledge between them to make responsible decisions and to get an aircraft on deck.

Ltjg. Barnes flies with VFA-15.

Photo by PH3 Alex C. Witte
Modified